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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.						
10/613,398	07/03/2003	Hossein Amidi	034559-000002	4470						
7590 Robert E. Krebs Thelen Reid & Priest LLP P.O. Box 640640 San Jose, CA 95164		01/03/2007	<table border="1"><tr><td>EXAMINER</td></tr><tr><td>DINH, TUAN T</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td colspan="2">2841</td></tr></table>		EXAMINER	DINH, TUAN T	ART UNIT	PAPER NUMBER	2841	
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE								
3 MONTHS	01/03/2007	PAPER								

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/613,398	AMIDI ET AL.	

Examiner  
Tuan T. Dinh

Art Unit  
2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-11 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 10/09/03.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Abstract***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Deneroff et al. (U.S. Patent 6,115,278).

As to claims 1-2, Deneroff et al. discloses a memory module (10) comprising:  
a printed circuit board (2) having a plurality of connector pins (6, column 5, lines 61-62);

a plurality of memory devices (DDR SDRAM-3) mounted on said printed circuit board (10); and

an electrical circuit (traces or components mounted on the PCB 2) coupling said plurality of memory devices (3) to said plurality of connector pins (6) such that said plurality of connector pins (6) has multiple functionality based on the architecture of said plurality of memory devices (3).

As to claim 3, Deneroff et al. discloses said plurality of connector pins (6) engages with a memory socket (20), said memory socket communicating with a memory controller.

As to claim 4, Deneroff discloses said memory controller (20) includes: a plurality of controllers, each controller corresponding to an architecture of the memory devices; an Finite State Machine (FSM) coupled to said plurality of controllers; an address multiplexor coupled to said FSM, said address multiplexor communicating with said memory socket; a control multiplexor coupled to said FSM, said control multiplexor communicating with said memory socket; and a data multiplexor coupled to said FSM, said data multiplexor communicating with said memory socket (12).

As to claim 5, Deneroff et al. further comprising: a second electrical circuit (components mounted on and near the SDRAM 3), said second electrical circuit coupled to said plurality of memory devices; and a plurality of testing pins (some of the pins from pins 6) coupled to said second electrical circuit.

As to claim 6, Deneroff et al. inherently discloses second electrical circuit supports a JTAG configuration.

As to claim 7, Deneroff et al. discloses said plurality of connector pins (6) includes 220 pins (column 7, line 50).

As to claims 8-9, Deneroff et al. discloses a computer comprising: a main board (motherboard 16); and a memory module (4) coupled to said main board (16), said memory module including: a printed circuit board (2) having a plurality of connector pins (6); and a plurality of memory devices, which is a DDR SDRAM (3) mounted on said printed circuit board, an electrical circuitry (components) electrically coupling said plurality of memory devices to said plurality of connector pins such that said plurality of connector pins has multiple functionality based on the architecture of said plurality of memory devices (3).

As to method claims 10-11, one would necessarily perform the cited method steps in using the apparatus rejected above.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Karabatsos, Dell et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reichard Dean can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tuan Dinh  
December 19, 2006.